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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/588,072      | 06/05/2000  | Ahmed Saifuddin      | QCPA000320          | 8110             |

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Qualcomm Incorporated  
Patents Department  
5775 Morehouse Drive  
San Diego, CA 92121-1714

EXAMINER

TORRES, JOSEPH D

ART UNIT PAPER NUMBER

2133

DATE MAILED: 01/29/2004

19

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/588,072

Applicant(s)

SAIFUDDIN ET AL.

Examiner

Joseph D. Torres

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 9-34 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 9-15, drawn to a Method for a Product Encoder for Generating Different Classes of Information Bits from Received Information Bits, Encoding Groups of the Classes of Information Bits and Forming a Frame, classified in class 714, subclass 755.
- II. Claims 16-23, 30 and 31, drawn to a Method for Decoding a Product Code by Recovering the Frame If an Outer code Indicates Correct Reception and Recovering Groups of Information Bits If an Outer code Indicates Incorrect Reception the Outer Code Used to Indicate Correct Reception of a Frame and the Inner Code Used to Indicate Correct Reception of a Group Within the Frame, classified in class 714, subclass 755.
- III. Claims 24-29, drawn to An Apparatus Comprising a First Component to Generate a Plurality of Information Bits Containing Multiple Groups of Information Bits of Different Classes for Use in a Product Encoder, classified in class 714, subclass 776.
- IV. Claims 32-34, drawn to a System Comprising a Transmitter for Transmitting a Product Code and Receiver for Receiving a Product Code, classified in class 714, subclass 776.

The inventions are distinct, each from the other because of the following reasons:

Inventions Group I, a Method for a Product Encoder for Generating Different Classes of Information Bits from Received Information Bits, Encoding Groups of the Classes of Information Bits and Forming a Frame, and Group II, a Method for Decoding a Product Code by Recovering the Frame If an Outer code Indicates Correct Reception and Recovering Groups of Information Bits If an Outer code Indicates Incorrect Reception the Outer Code Used to Indicate Correct Reception of a Frame and the Inner Code Used to Indicate Correct Reception of a Group Within the Frame, are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention Group I, a Method for a Product Encoder for Generating Different Classes of Information Bits from Received Information Bits, Encoding Groups of the Classes of Information Bits and Forming a Frame, has separate utility such as in a receiver using a product error correcting code and independent of the particular algorithm used at the receiver for decoding the product error correcting code. In the instant case, invention Group II, a Method for Decoding a Product Code by Recovering the Frame If an Outer code Indicates Correct Reception and Recovering Groups of Information Bits If an Outer code Indicates Incorrect Reception the Outer Code Used to Indicate Correct Reception of a Frame and the Inner Code Used to Indicate Correct Reception of a Group Within the Frame, has separate utility such as in a receiver for decoding product code only using error detection. See MPEP § 806.05(d).

Inventions Group I, a Method for a Product Encoder for Generating Different Classes of Information Bits from Received Information Bits, Encoding Groups of the

Classes of Information Bits and Forming a Frame, and Group III, An Apparatus Comprising a First Component to Generate a Plurality of Information Bits Containing Multiple Groups of Information Bits of Different Classes for Use in a Product Encoder, are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention Group I, a Method for a Product Encoder for Generating Different Classes of Information Bits from Received Information Bits, Encoding Groups of the Classes of Information Bits and Forming a Frame, has separate utility such as in a system whereby information bits are provided in parallel and classified according to their parallel arrangement. In the instant case, invention Group III, An Apparatus Comprising a First Component to Generate a Plurality of Information Bits Containing Multiple Groups of Information Bits of Different Classes for Use in a Product Encoder, has separate utility such as in a system whereby the information bits are not automatically received broken up into separate classes and not using a packet/frame protocol. See MPEP § 806.05(d).

Inventions Group IV, System Comprising a Transmitter for Transmitting a Product Code and Receiver for Receiving a Product Code, and Group I, a Method for a Product Encoder for Generating Different Classes of Information Bits from Received Information Bits, Encoding Groups of the Classes of Information Bits and Forming a Frame, are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the

subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination, Group IV System Comprising a Transmitter for Transmitting a Product Code and Receiver for Receiving a Product Code, as claimed does not require the particulars of the subcombination, Group I a Method for a Product Encoder for Generating Different Classes of Information Bits from Received Information Bits, Encoding Groups of the Classes of Information Bits and Forming a Frame, as claimed because the transmitter can receive the product code from an encoder and does not require a product encoder. The subcombination has separate utility such as for an encoder generating the product code.

Inventions Group II, a Method for Decoding a Product Code by Recovering the Frame If an Outer code Indicates Correct Reception and Recovering Groups of Information Bits If an Outer code Indicates Incorrect Reception the Outer Code Used to Indicate Correct Reception of a Frame and the Inner Code Used to Indicate Correct Reception of a Group Within the Frame, and Group III, An Apparatus Comprising a First Component to Generate a Plurality of Information Bits Containing Multiple Groups of Information Bits of Different Classes for Use in a Product Encoder, are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention Group II, a Method for Decoding a Product Code by Recovering the Frame If an Outer code Indicates Correct Reception and Recovering Groups of Information Bits If an Outer code Indicates Incorrect Reception the Outer Code Used to Indicate Correct Reception of a Frame and the Inner Code Used to

Indicate Correct Reception of a Group Within the Frame, has separate utility such as in a receiver for decoding product code only using error detection independent of how the information bits are generated. In the instant case, invention Group III, An Apparatus Comprising a First Component to Generate a Plurality of Information Bits Containing Multiple Groups of Information Bits of Different Classes for Use in a Product Encoder, has separate utility such as in a system whereby the information bits are not automatically received broken up into separate classes and not using a packet/frame protocol. See MPEP § 806.05(d).

Inventions Group IV, System Comprising a Transmitter for Transmitting a Product Code and Receiver for Receiving a Product Code, and Group II, a Method for Decoding a Product Code by Recovering the Frame If an Outer code Indicates Correct Reception and Recovering Groups of Information Bits If an Outer code Indicates Incorrect Reception the Outer Code Used to Indicate Correct Reception of a Frame and the Inner Code Used to Indicate Correct Reception of a Group Within the Frame, are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination, Group IV System Comprising a Transmitter for Transmitting a Product Code and Receiver for Receiving a Product Code, as claimed does not require the particulars of the subcombination, Group II a Method for Decoding a Product Code by Recovering the Frame If an Outer code Indicates Correct Reception and Recovering

Groups of Information Bits If an Outer code Indicates Incorrect Reception the Outer Code Used to Indicate Correct Reception of a Frame and the Inner Code Used to Indicate Correct Reception of a Group Within the Frame, as claimed because the receiver only requires an indication from the decoder and does not require the actual means to verify the correct or incorrect reception. The subcombination has separate utility such as in detecting and verifying correct reception.

Inventions Group IV, System Comprising a Transmitter for Transmitting a Product Code and Receiver for Receiving a Product Code, and Group III, An Apparatus Comprising a First Component to Generate a Plurality of Information Bits Containing Multiple Groups of Information Bits of Different Classes for Use in a Product Encoder, are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination, Group IV System Comprising a Transmitter for Transmitting a Product Code and Receiver for Receiving a Product Code, as claimed does not require the particulars of the subcombination, Group III An Apparatus Comprising a First Component to Generate a Plurality of Information Bits Containing Multiple Groups of Information Bits of Different Classes for Use in a Product Encoder, as claimed because the transmitter does not require a means for generating different classes of information bits since the different classes may be received from another device. The subcombination has separate utility such as in a system whereby the



information bits are not automatically received broken up into separate classes and not using a packet/frame protocol.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II and vice a versa, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group III and vice a versa, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group IV and vice a versa, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group III and vice a versa, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group IV and vice a versa, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group III is not required for Group IV and vice a versa, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

A telephone call was made to Thien Nguyen on 22 January 2004 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (703) 308-7066. The examiner can normally be reached on M-F 8-5.

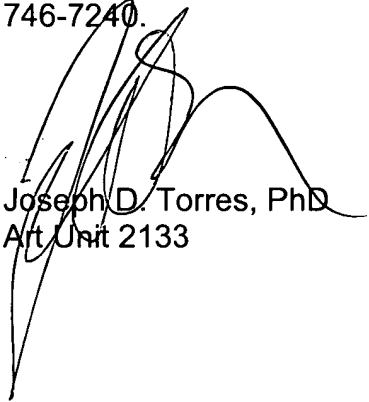
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

Application/Control Number: 09/588,072  
Art Unit: 2133

Page 10

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-

746-7240.



Joseph D. Torres, PhD  
Art Unit 2133